# Jeff Chen

## Education

2012-2016

[**Carnegie Mellon University Class of 2016**](http://cmu.edu) - B.S. Computer Science

* Expected minors in Human-Computer Interaction and Robotics
* Relevant coursework - Introduction to Computer Systems, Parallel and Sequential Data Structures and Algorithms, Great Theoretical Ideas in Computer Science, Science of the Web, Human-Robot Interaction, Cognitive Robotics, Humanoids

## Experience

Summer 2013

**Stokes Scholar**, [*National Security Agency*](https://nsa.gov/)

* Held TS//SI clearance since 2012
* Wrote tool to detect and neutralize Windows malware using infection markers
  + Enabled lightweight, fast, and accurate detection of known malware
  + Neutralized malware by taking control of known infection markers
  + Applied heuristic analysis to potential infection markers with success rate comparable to commercial antivirus software
* Created tool that displays a two-dimensional overview of network activity for intuitive analysis

2010-2012

**Software Lead**, [*AUVSI RoboSub*](http://avbotz.com/)

* Wrote and maintained software for an autonomous submarine
  + Implemented computer vision algorithms, including image segmentation, blob detection, and line detection
  + Wrote PID controller and Kalman filter for accurate motion through potentially turbulent water
  + Managed large codebase and over ten developers with Git
* Taught novice programmers object-oriented programming and C++

## Projects and Awards

Februrary 2014

Created [**MiniPlay**](https://github.com/iambald/MiniPlay), a Chrome extension to operate Google Play Music and add features like global shortcuts and Last.fm scrobbling. Has over 100 daily users.

January 2014

Built a [**threadpool**](https://github.com/iambald/threadpool) in modern C++11 to fill the gap in the C++ standard library between std::async and std::thread.

April 2013

Wrote [**Skein**](https://github.com/iambald/Skein), a high-performance Skein-1024 brute forcer for the [xkcd Alma Mater challenge](http://xkcd.com/1193) that out-performed the vast majority of schools including Cornell, and coming only twenty bits short from the winner, a group of CMU students using a supercomputer.

December 2012

Wrote a virtual machine in C, designed to interpret and execute bytecode in C0 as a final project for 15-122.

September 2012

At the Fall 2012 PennApps hackathon, developed [**Chroma**](https://github.com/iambald/Chroma), an Android application designed to help colorblind people distinguish between the entire color spectrum

October 2011

Finalist for the **CSAW High School Cyber Forensics Challenge**

## Skills

Languages

C++, C, Java, Javascript, Python, SML, x86 assembly

Web

CSS, HTML, Node.js

APIs

WinAPI, NTAPI, OpenCV, POSIX

Other

Bash, Git, Markdown, LaTeX, CMD, GDB

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